

EXECUTIVE SUMMARY

The Waterfront Regeneration Trust (the Trust) illustrates the innovative partnerships that not-for-profit organizations can create in the cleanup and reuse of contaminated properties. Established in 1988 as an outgrowth of the Royal Commission on the Future of the Toronto Waterfront, the Trust has completed over 80 projects along the shore of Lake Ontario by “applying an ‘ecosystem’ approach and by bringing people, ideas and resources together to invest in waterfront revitalization”¹ Several of the Trust’s successful brownfields projects are presented in more depth as part of this case study; see the discussions of Cobourg Harbor, Toronto Hydro, and the West Don Lands.²

THE TRUST AS A BROKER

Depending on the project, the Trust can act as facilitator, mediator, or technical consultant as it helps the property owner, developer, community, provincial and local governments, and regulators bridge their different perspectives. Their role as a broker was instrumental in the creation of the Waterfront Trail, a 325 kilometer greenway/bike trail that stretches nearly the entire northern shore of Lake Ontario. The Trust worked with the 28 municipalities on the segments of the trail that passed through their communities. Many of the segments involved properties with various levels of environmental contamination. Through the trail’s frequent intersections with contaminated sites, the Trust developed an expertise in the intricacies of brownfields redevelopment.

THE ECOSYSTEM PLANNING APPROACH

Another unique characteristic of the Trust is its commitment to ecosystem planning -- the integration of community, ecological, and economic goals. Its ecosystem planning approach permeates virtually all Trust activities and projects. Adopted as part of the Royal Commission’s original mission, the Trust’s projects aim to integrate the management and conservation of natural resources with the redevelopment of contaminated properties. Recently the Trust published a major report, *Greening the Toronto Port Lands*, that creates a design template for building green infrastructure throughout Toronto’s former industrial waterfront. It provides a model that can easily be applied to large urban areas well beyond the shores of Lake Ontario. Moreover, the Trust’s efforts in creating the Waterfront Trail provide it with prime opportunities to promote its themes of regeneration and ecosystem planning.

THE LOCAL LAND USE PROCESS

The Trust uses the municipal land use planning and development processes as its focal point for brown-field redevelopment. The intended future use for a contaminated property is now the bridge between cleanup requirements and redevelopment potential in this new era of

risk-based cleanups. Since land use is the primary domain of local governments, nearly all of the Trust's brownfields projects involve creating strong partnerships with municipal officials.

For example, the local Waterfront Trail projects were spearheaded by municipalities. Although no provincial or state legislation required these local governments to adopt or formally incorporate the Trust's greenway strategy into local law, many of the municipalities have revised their official land use plans to include the strategy and its ecosystem planning principles. From the municipal government perspective, it makes both environmental and economic sense to follow a local land use plan that seeks to revitalize contaminated land through the integration of the community, ecological, and economic goals.

RECENT PROJECTS & FUTURE DIRECTIONS

The Trust and its staff continue their involvement in a number of community redevelopment efforts.³ For example, the Trust is helping build consensus around Toronto's bid for the 2008 Summer Olympics that could include the redevelopment of waterfront properties for Olympic venues. In April 1998, the Trust convened over 100 experts from Canada, the US, and Europe to discuss brownfields redevelopment issues and compare the Ontario and Toronto experiences with other best practices.⁴ The Trust is also working on an international waterfront gateway strategy for Buffalo, NY, and Fort Erie Ontario. This work has been commissioned by the two cities and marks a new era in international cooperation that will benefit the economy and the environment.

Over the next two or three years, the Trust plans to continue its work with national and provincial environmental regulators to improve the certainty of regulations and rules in the cleanup and redevelopment process. Moreover, the Trust will focus further activities on improving the climate for private investment as the best means to dispel the "fence and guard dog" mentality of handling contaminated properties.

A. Setting the Stage - History & Background

The Waterfront Regeneration Trust (the Trust) is a leader in the redevelopment of brownfields in the Toronto region. Established in 1992 as a quasi-public “agency at arms length,” the Trust is currently evolving into an independent, entrepreneurial not-for-profit organization.

1. The Royal Commission — Creation of the Ecosystem Planning Approach

The Trust was borne out of recommendations made by the Royal Commission on the Future of the Toronto Waterfront in 1991.⁵ In 1988 the Royal Commission was given a three year mandate to make recommendations regarding federal lands and environmental issues related to the waterfront and possible use of federal lands and facilities for Olympic purposes.⁶

In 1992, the Royal Commission completed its analysis of the environmental and economic issues facing the entire North Shore of Lake Ontario. The commission adopted an ecosystem planning approach which included both local government planning authorities and conservation authorities.⁷ The goal of an ecosystem approach is to integrate community, ecology, and economy, rather than isolate these issues. The Royal Commission emphasized collaborative approaches to decision making, and put forward nine guiding principles for the Toronto Waterfront: Clean, Green, Accessible, Connected, Open, Useable, Diverse, Affordable and Attractive. These principles were meant to “capture the public’s expecta-

tions and hopes for the waterfront, and guide the work of the Trust and its partners.”⁸

The creation of a waterfront regeneration trust was a specific recommendation of the Royal Commission to which the Canadian government quickly responded.⁹ The Trust was officially established in 1992 to implement the recommendations of the Royal Commission. Given the history of jurisdictional battles over Toronto’s waterfront, the Trust was seen as the ideal vehicle to overcome the waterfront’s past controversies. The Trust’s chief objective was to develop a greenway along the entire northern shore of Ontario, a distance of 325 Kilometers.



2. Executive Leadership & Vision

At the helm of the Trust is David Crombie, former mayor of Toronto and federal cabinet minister of Indian and Northern Affairs. Given his previous local government experience as Mayor of Toronto, Crombie is familiar with the issues and the players surrounding Toronto’s waterfront. He not only brings experience to the Trust, but dynamic leadership and vision about the waterfront's future. Crombie and his staff

possess the talent to bring diverse parties together to seek collaborative solutions -- a critical skill in the redevelopment of brownfields.

3. The Lake Ontario Waterfront Trail -- A Link to Brownfields Redevelopment

The Waterfront Trail, opened in 1995, stretches a total of 325 kilometers along Lake Ontario's northern shore. The trail was the Trust's first major project, as they assisted 28 municipalities with the portions of the trail owned within each locality. Because the overarching goal of the trail is to connect communities, the Trust has been careful to avoid activities that could be construed by local governments as undue interference or a "land grab". Parts of the trail pass through private industrial land, yet none traverse through private residential properties. It is intersections with these frequently contaminated industrial properties that forms the confluence between the trail and brownfields development.

The trail is not just a bike and walking path, but a band of interconnected communities that embodies the vision of the Royal Commission to develop a "continuous trail system [that] guarantees public access to these natural and open spaces."¹⁰ The ecosystem approach incorporates the natural environment and watershed planning with traditional economic development strategies, zoning, and land use planning. As a result, one of the Trust's main challenges in implementing the trail was confronting the gridlock that can result from this approach of crossing traditional local government boundaries and jurisdiction.

The Trust also uses the Waterfront Trail to spearhead its multi-faceted activities and projects. Some of the Trust's outreach activities have included investors roundtables, ecological literacy, speaking engagements, technical work planning reports, and a well-stocked resource center. In addition, the Trust publishes a newsletter with a circulation of 12,000. They have also established a programmatic connection with the University of Toronto and several other universities in Ontario.

4. Trust as Broker

The Trust serves as a catalyst for action as well as a coordinator of ideas and resources to ignite economic and environmental renewal. The Trust brings extra value to brownfields redevelopment efforts by developing partnerships among all of the stakeholders. As a result of the Trust's involvement, the development process is more collaborative, and both the economic and environmental benefits of regeneration are better articulated.

The Trust performs well in these capacities for several reasons. First, the staff at the Trust have backgrounds in municipal government — they know the local land use planning and development process. Second, they have strong relationships with and understand the different perspectives of the various stakeholders whether they are municipal officials, provincial regulators, community groups, or private developers. Third, the Trust's successful track record gives it credibility when it acts as an independent third-party mediator or convenor. "Before we embarked on this process with the Waterfront Regeneration Trust, there was nothing but conflict and anger between

the community and the company, with the municipality caught in the middle.”¹¹

B. Regulatory and Programmatic Framework

1. Local Land Use Planning & Zoning

Compared with other brownfields redevelopment programs, the Trust emphasizes the local land use process as the framework for its projects and activities. Instead of focusing just upon national or provincial cleanup guidelines and legislation, the Trust astutely understands that decisions about a property’s intended use are at the crux of successful brownfields cleanup and redevelopment. Under Ontario’s new site-specific risk-based cleanup policies, the amount and type of residual contamination depends on the intended uses for the site. Future land use also drives a site’s redevelopment potential (i.e., the rate of return on housing is generally less than a downtown retail business or entertainment center).

The Trust understands its strategic role as a convenor or facilitator in the local land use process. It recognizes that decisions about cleanup and redevelopment must include meaningful participation of all of stakeholders in the community. For example, participating municipalities are highly involved in creating the greenway strategy for their segment of the Waterfront trail.¹² As a result of this high level of participation, municipalities develop a strong commitment to follow the principles of ecosystem planning. Despite the absence of formal legislation demanding that municipali-

ties adopt the greenway strategy, many municipalities have revised their Official Plan¹³ to include these ecosystem principles.

2. The Cleanup Process - The Role of the Trust and Provincial Government

Compared with the U.S. EPA and state environmental departments, the Canadian national and provincial environmental agencies do not play a high-profile regulatory role in the cleanup of brownfields. Unlike its American counterparts, Ontario’s Ministry of the Environment does not establish formal cleanup standards by promulgating regulations. Instead, administrative guidelines are issued that establish cleanup levels or criteria for over 117 chemicals that might pollute the soil or infiltrate below the surface soil or the groundwater.¹⁴ Issued by the Ministry in the summer of 1996, these guidelines set forth three general classifications for the cleanup of contaminated properties: (1) Background Levels; (2) Generic Criteria; and (3) Risk-Based Site-Specific Criteria (e.g. that requires Ministry review and approval).¹⁵ While these classifications give landowners and other stakeholders direction and flexibility, they must still adequately protect human health and the environment, similar to their counterparts in the United States. Brownfields remediation, therefore, is not driven by strict adherence to federal or state cleanup statutes and regulations; rather, it is set by administrative policies.¹⁶

Ontario’s Ministry of the Environment largely relies on the private sector and market place to perform the cleanups as an in-

tegral part of the development process. With increased scientific knowledge and a buoyant market place, Ontario's provincial government has delegated responsibilities for overseeing brownfields restoration and reuse to municipalities. As a result of this move toward decentralization, the provincial government is not directly involved with brownfields cleanup today (unless legal compliance is an issue). In fact, Canadian financial institutions now play a greater role in cleanup, given their required review for loan approval.

Because this jurisdictional shift is still in progress, confusion may occur on the respective roles and responsibilities of the environmental regulator.¹⁷ Given the potential for confusion, the Trust focuses its efforts within a particular project to ensure that all parties are clear about each other's roles and responsibilities.

The Trust also continues with its prominent policy role of advising the provincial government regarding necessary guidance for the environmental cleanup of contaminated properties.¹⁸ They are currently working closely with the Environment Ministry and other stakeholders to develop guidance for municipalities to integrate the cleanup criteria into their local land use planning and zoning processes.

C. Project Examples

The Trust has facilitated the implementation of approximately 80 projects on the Waterfront Trail over a five year period. Of the \$37 million invested in these sites, \$12 million was contributed by the Provincial government and \$25 million was contributed by municipalities, conservation

authorities, service clubs and the private sector.¹⁹ The following are several samples from the Trust's portfolio of projects.

1. Cobourg Harbor

Located one hour east of Toronto, along the shores of Lake Ontario, the Town of Cobourg today is a flourishing community and quaint tourist destination.²⁰ With the help of the Trust and the collaboration among local governments and a local private developer, the regeneration of Cobourg illustrates how small communities can overcome the industrial legacy of contaminated waterfront land.²¹ Similar to many communities on both shores of the Great Lakes, Cobourg's waterfront is now the center of new economic opportunities in the form of both residential and commercial development.

Originally constructed in the 1840s, Cobourg harbor, like many mid-size ports along the Great Lakes' transportation network, prospered from the heavy industrial uses along its waterfront. Immediately following World War II, however, industrial activity significantly declined throughout the 1950s.²² According to local developer James Hoffman, "Cobourg prospered because of its natural harbor and marine commerce, but as the economy changed, people turned their backs on the water."²³ Many of these industries turned their backs on Cobourg as they left the waterfront strewn with abandoned warehouses, oil storage tanks, coal fields, railway tracks, and contaminated lands. Local developer and engineer James Hoffman, however, did not turn his back, but rather chose to seize this development opportunity.²⁴

In 1989, the Town approved a Harbor Area Secondary Plan to guide redevelopment of the waterfront. The plan emphasized support of economic development activities in the downtown while maintaining Cobourg's character. Early on, Hoffman realized the Waterfront Trail was an amenity that would bring value to the overall waterfront and his concepts for its redevelopment. Within this context, Hoffman began his brownfields redevelopment efforts to acquire the former McAsphalt Oil Company property, a two-acre parcel adjacent to three other abandoned properties.²⁵

Since contamination problems existed across several parcels, Hoffman and the Ontario Ministry of the Environment approached the Trust in the early 1990s to help facilitate the cleanup and redevelopment. The Ministry's thoughts were straightforward -- they needed an outside facilitator to help address the cross-boundary contamination, and thus sought an objective, informed third party, rather than a regulator or property owner. From Hoffman's perspective, it was critical to assemble all of the stakeholders from the outset to generate initial interest and momentum for the cleanup and redevelopment of the site. Yet, it would be difficult for him alone, as the developer, to get buy-in from all of the stakeholders without the assistance of a credible support group. In this case, the Trust fit the needs of both the environmental regulator and the developer.

The initial meetings focused upon the environmental condition of the site and possible cleanup strategies. The Trust brought Hoffman together with the existing landowners, the Town of Cobourg, the Ministry of the Environment, and local residents.

As part of the cleanup negotiations, the community voiced an important concern of mitigating odors from the old tank farms. During the preliminary discussions two of the property owners near the McAsphalt site, Imperial Oil and Ultramar, initially resisted the cleanup option. Given the high cost of remediation relative to the market value of the land and the general perception of possible legal liability, they thought warehousing their properties might minimize their overall risks. Eventually, the Trust's mediation skills and Hoffman's persistence paid off. The two oil companies agreed to take care of the contamination caused by their facilities by using air sparging.²⁶

Five Critical Steps in the Reclamation of Cobourg's Waterfront - A Developer's Perspective ²⁸

1. Assemble a meeting with all of the various stakeholders and enlist the help of a credible and objective support group to help facilitate the discussions

2. Consolidate support from existing owners' public relations experts and prepare for an open and honest dialogue with the public about the nature of the environmental contamination and the cleanup options.²⁹

3. Acquire the land with the assistance of competent legal counsel.

4. Commence and complete the cleanup of the environmental contamination.³⁰

5. Convince a lender to finance the redevelopment project.³¹

The Trust's role as mediator was successful, preventing possible litigation and maintaining Trail connectivity. Today Cobourg residents live in 40 condominiums on the former McAsphalt Oil site. "The Waterfront Regeneration Trust has done a lot to unlock Cobourg's potential, both for economic and environmental improvement." Hoffman continues with his brownfields redevelopment efforts by acquiring a total of 14 acres along Cobourg's Harbor with plans to remediate and develop additional sites nearby.³²

Complete regeneration of a community, such as Cobourg, cannot happen without the leadership of local government and the creation of partnerships. As part of its effort to redevelop these contaminated properties, the town of Cobourg commenced an aggressive program to build new public infrastructure and amenities along the waterfront.³³ A landscape architect designed beach structures to encourage people to use the beach. The town hired staff and equipment to clean the beach daily during prime tourist season. Cobourg also built a brand new marina, twice the size of its predecessor, in addition to a campground.³⁴ Plans were made to construct extensive walkways that would connect Cobourg's historic downtown with the waterfront and the Trust's Waterfront Trail. Thanks to further help from the Trust, renovations of the area behind the old town hall are now in place to include a pedestrian square with space for shops and restaurants. Wayne Deveau, Director of Community Services for the Town of Cobourg, aptly remarked, "next to our citizens, our waterfront is our greatest asset."

2. The Area-wide Soil & Ground Water Management Plan for Toronto's Port Lands

For over eighty years, Toronto's central waterfront served as the home to many of its heavy industries. Like many ports on the Great Lakes, this area is going through an economic and environmental transition. Once a bustling manufacturing, bulk storage, and shipping center, changes in the global market place have caused a dramatic shift in Toronto's waterfront activities. New high-tech industries, recycling centers, and entertainment enterprises are starting to emerge on the abandoned sites of former oil storage, scrap metal yards, and manufacturing plants.³⁵

The Port Land's history of intense industrial usage has, unfortunately, left behind a legacy of environmental contamination in both the soil and groundwater. Many of these companies adopted a common practice of filling in the lake to provide more land for these industrial uses.³⁶ While chemical contamination that exceeds the MOE's criteria is the exception, the Port Lands commonly include excessive levels of lead, constituents of gasoline, pesticides, and PCBs.

Given its close proximity from the heart of downtown Toronto, with access to major transportation routes and adjacent to some of the area's best parklands and beaches, "Toronto's Port Lands are strategically located for investment."³⁷ Four hundred twenty acres of the Port Lands is publicly owned by the Toronto Economic Development Corporation (TEDCO).³⁸ TEDCO is the City of Toronto's primary agency for

bringing economic activity back to the port area through new development and strategic environmental restoration.³⁹

In preparing a cleanup plan for its first brownfields redevelopment project in 1992, TEDCO soon recognized that it needed a different approach because of two major problems in this area: (1) groundwater existing close to the surface; and (2) the migration of contamination from adjacent sites. These challenges made it difficult for TEDCO to move forward with its cleanup and redevelopment plans on a site-by-site basis. Progress on this initial brownfields project for Toronto Hydro initially stalled. Instead of proceeding with lengthy and complex individual cleanup plans, TEDCO was able to convince the City of Toronto and the Ministry of Environment that preparation of an area-wide soil and ground water management plan would be sufficient for individual projects within this area.

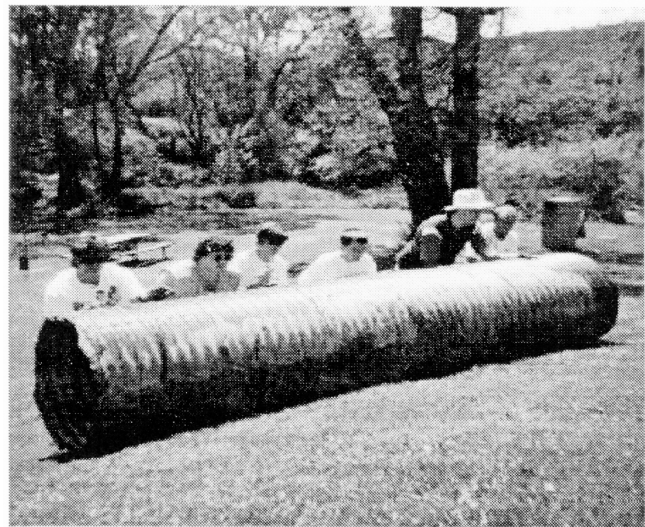
The management plan establishes an “environmental road map for the assessment and restoration of soil and ground water conditions based on the specific biophysical conditions of the area and intended land use.”⁴⁰ This innovative area-wide approach has two main components: an area-wide monitoring program and the Individual Site Initiative.⁴¹ The plan now provides TEDCO and its tenants with a “decision-making framework that is based on risk management, information sharing, and cooperation between interested parties.”⁴²

In October 1997, the area-wide plan was formally endorsed by TEDCO, the City of Toronto, and the Ministry of Environment

through an official memorandum of understanding (MOU). The MOU establishes a greater level of regulatory certainty for all parties by setting forth a clear process for development approvals and minimizing the confusion of overlapping municipal and provincial rules. Under the MOU, developers would no longer have to negotiate with two levels of government, but can deal directly with the municipality. TEDCO now uses this soil and ground water management plan as an integral part of its overall redevelopment strategy for the Port Lands.⁴³

The Trust’s Role in Building Consensus Around the Area-Wide Plan

Development of the area-wide soil and ground water plan and the public participation process was managed for TEDCO by



the Waterfront Trust.⁴⁴ The Trust built consensus by designing a collaborative process headed by a steering committee that included representatives from the banks and financial sector, private developers, tenants and landowners, municipal authorities, and provincial regulators. At critical stages in the planning process, the

Trust held two public workshops to broaden the level of public involvement and participation.⁴⁵

Compared with some of its other projects, the Trust adopted more of a leadership role in this area, educating the mayor's office on both the need for public discussion and private-sector influence on the cleanup strategy. Each week the Trust would contact the mayor's office to monitor the issues and evaluate the community's stance. Because of the Trust's involvement and its efforts towards community participation, the public's level of trust and confidence increased. Subsequently, elected officials were able to push the provincial government more than they might have otherwise, and cleanup proceeded despite the absence of official guidelines.

Given the Ministry's negotiations over the new cleanup guidelines, the Trust knew that industries would be closely watching the outcome of this project for its practical applications to other cleanups. Although these groups may have traditionally been wary of sharing information with each other, the consensus building process helped facilitate open communication and was critical to ensuring success. The Trust's involvement also helped investors understand the dynamics of the project and lend their financial support. Through a Trust-sponsored "investors roundtable," TEDCO was able to attract financial participation for its brownfields projects.

3. Toronto Hydro Services Center -- Risk-Based Remediation that Works!

For sixty years Shell Canada operated a 12 acre blending plant, fuel storage facility, and distribution center in Toronto's Port Lands.⁴⁶ As industrial restructuring occurred in the region, Shell found that it no longer needed this facility. By 1992, Shell's lease on the land with TEDCO was about to expire. About the same time, Toronto Hydro, a municipal utility corporation, was looking for a site to consolidate its metro-wide training and customer service operations. With a potential tenant and site on the horizon, TEDCO, Shell, and Toronto Hydro were motivated to expedite the site remediation and redevelopment.

Initial site assessments, however, indicated that remediation would be complex and costly. The site was contaminated with fuels, lube oils, pesticides, and traces of arsenic, lead and other heavy metals. Preliminary plans would require the removal of an estimated 63,000 cubic meters of soil to meet provincial cleanup standards for industrial and commercial use. The costs for such a comprehensive cleanup were estimated at more than \$10 million.

Following consultation with Ontario's Ministry of the Environment (MOE), TEDCO agreed to allow Shell to undertake a site-specific risk assessment approach for cleaning the site, with Shell retaining ultimate legal and financial responsibility for any future cleanup. In order to avail themselves of the risk-based cleanup criteria, the Ministry required the parties to perform a series of epidemiological studies to determine the potential human health risks.

Shell took the lead in paying for the removal and treatment of almost 55,000 tons of contaminated soils.⁴⁹ About twenty percent of the soil was treated using low temperature thermal desorption and then returned to the site. The soil containing arsenic and pesticides was disposed of at a licensed landfill. A Waterloo Barrier was also installed along the boundaries of the property to prevent contaminants from other sites from entering the property and recontaminating the soils. Another concern

was the potential build up of combustible gases underneath the property. Toronto Hydro installed a system to collect and dissipate the gas; however, the monitor for this system has never been activated so far.⁵⁰

The cleanup, which included treatment and recycling of contaminated soils, cost a little more than \$5 million. This represents a savings of almost fifty percent (50%) from the original estimates while also ensuring the protection of human health and the en-

Characteristics of Green Infrastructure

Green infrastructure includes both traditional recreational opportunities and habitat and natural resource protection. It blends urban ecological functions with green alternatives. Examples of green infrastructure employed by the Waterfront Regeneration Trust include utilizing wetlands and other non-structural methods as a means of flood control and creating networks of green corridors that give wildlife freedom of movement and recreational benefits to citizens. The Trust's work in this area of infrastructure is on the cutting edge of municipal infrastructure development.

The Trust's new publication, *Greening Toronto's Port Lands*, provides municipalities with the framework of how green infrastructure would look and function within the city's public domain. Key principles include providing a multi-functional framework for development, protecting biodiversity, creating biological linkages, recognizing watershed contexts, reinforcing sense of place, and involving the community. The following functions provide the basis for recognizing these principles:

- Improve Environmental Quality
- Restore Natural Habitat
- Enhance Recreational Opportunities
- Enhance Urban Design

Providing a framework for green infrastructure is only the beginning, however. The next step is designing a process to bring this green vision into reality. The Trust's strategy is to approach the municipal planners to obtain their conceptual approval. Subsequently, the public consultation process is used as the vehicle for building consensus and support for green infrastructure projects. The Trust assists municipalities in adopting green infrastructure elements into their official land use plans, rather than lament the lack of green infrastructure on an individual project basis.

virmonment.⁵¹ Furthermore, the roles and responsibilities for long-term monitoring and the use and design of the facilities cannot change without prior approval of TEDCO, the municipality and the Ministry of the Environment. Today a service center and employee training facility exists on the site, employing over 1000 people.⁵²

Over the past six years, TEDCO has completed five major redevelopment projects that have generated the following environmental and economic benefits:

- Area restored to productive use: 61.5 acres;
- Sq. Footage of new space built: 710,000;
- New jobs on former brownfields sites: 1,377;
- Construction jobs created: 720;
- Value of construction: \$60 million;
- New Property Tax Assessments (1997): \$2.71 million.⁵³

4. A “Green” Redevelopment Plan for the Port Lands

Beyond its initial success with the area-wide approach and the successful redevelopment of Toronto Hydro's site, the Trust realized that other redevelopment projects in the port area would confront many of the same issues. A redevelopment plan based on sound ecosystem planning principles might provide the port lands and TEDCO, as its primary property owner, with a comprehensive approach.⁵⁴ The Trust noted several outstanding issues and goals:

- Preserving 4,500 existing jobs;
- Determining jurisdictional authority following the change in ownership from the port to TEDCO;
- Creating a vision for the area.

At this preliminary stage, the Trust is working with neighborhoods to identify their unique characteristics in order to distinguish them from other communities in the city. One of the early outcomes of this envisioning process is the community's decision to use green infrastructure as a key part of the redevelopment framework.

5. West Don Lands

At one time the West Don area was a thriving community with a compatible mix of industries and residential uses. As these businesses declined, they left a familiar legacy of contamination and polluted soils that impeded possible efforts to revitalize the community.

In the late 1980s, preliminary ideas for redeveloping this industrial area which is located inland from the port on the Don River, included building affordable “social” housing as well as a mix of market-rate housing. The Province of Ontario offered the City of Toronto funding guarantees to create a residential community if the city would act as their agent in appropriating the land. Even though the land market hit bottom in 1989-1990, lowering land acquisition costs, the removal of the contaminated soils for this site would cost \$140 million or more. The cleanup was further complicated by the property's location in the flood plain. Given these market, environment, and other obstacles, initial redevelopment efforts stalled.

In June 1990, the Provincial government resumed discussions with Toronto, offering the city two guarantees: (1) the city's liability would not exceed \$20 million under any circumstance; and (2) the city would not accrue any costs if the province canceled the project. After further negotiations in 1992, the provincial government did indeed cancel the project, having spent \$350 million dollars to extinguish a declining industrial community. The site remained abandoned and derelict, surrounded on all sides by older residential neighborhoods.

Shortly thereafter, the Trust agreed to facilitate a redevelopment plan for the West Don Lands. The Trust's action plan sought to create critical links between the residential neighborhoods and the waterfront through a grid of green infrastructure. Given this rather innovative concept, it was necessary to educate the developers and investors about the tenets of green infrastructure. The Trust's outreach efforts also coincided with Toronto's need to update its Official Plan, a process which takes place every five years. By using the municipal planning process as the vehicle, the Trust was able to generate sufficient support for the West Don plan. The City Council adopted the West Don plan and included it in the Official Plan for Toronto.

In practice, this means that all development in the West Dons must comply with the goals of green infrastructure, and any party that disagrees with these requirements must prove why they are unable to use green infrastructure. Adoption of this green redevelopment plan was possible because of the consensus created among the community, political and financial players, industry, and local government.

ENDNOTES

1 Waterfront Trust Brochure, *Ecosystems and the Nature of Possibility*.

2 Interviews for this case study were conducted with Beth Benson and Jeff Evenson from the Trust along with materials presented by key participants at the Trust's April 1998 Brownfields Symposium. We regret that we did not have sufficient time to talk with all of the stakeholders involved in these projects.

3 A major policy development that may impact the Trust's activities is the January 1998 incorporation of seven municipalities into the City of Toronto. While the precise effects are too early to predict, statements from the transition team's report for the "new" Toronto suggests that this amalgamation will be favorable to the mission of the Trust: "Our new City has an opportunity to recognize the inter-relationships and develop integrated strategies for urban sustainability and livability." New City, New Opportunities. Toronto Transition Team Interim Report, Oct. 1997, p. 24.

4 Proceedings from their Brownfields Symposium should be available during the summer of 1998.

5 This Commission, in turn, had been launched in 1988 based upon Findings of the Intergovernmental Waterfront Committee (1986-1988), which researched the role of the Canadian government in Toronto's overall redevelopment scheme.

6 The report also looked at several of the municipal entities with formal jurisdiction over the waterfront (e.g., the Board of Toronto Harbor Commissioners and the Toronto Island Airport). See the *Regeneration: Toronto's Waterfront and the Sustainable City: Final Report*, Royal Commission on the Future of the Toronto Waterfront, Minister of Supply and Services Canada, 1992, pp. 1-2.

7 The ecosystem approach has now become common practice, illustrated by the presence of regeneration in design curricula and reading materials at local universities. Conservation Authorities are an important vehicle in handling the integration of land use planning and environmental cleanup for three reasons: they receive provincial-level funds, they own significant land holdings, and they possess expertise in ecosystem protection and management, including flood controls and storm water management. As watershed-based regional entities, conservation authorities are key players in the conservation movement in Ontario.

8 <http://www.waterfronttrust.org>

9 *Regeneration: Toronto's Waterfront and the Sustainable City: Final Report*, Royal Commission on the Future of the Toronto Waterfront, Minister of Supply and Services Canada, 1992, p. 13.

10 *Regeneration: Toronto's Waterfront and the Sustainable City: Final Report*, Royal Commission on the Future of the Toronto Waterfront, Minister of Supply and Services Canada, 1992, p. 6.

11 Quote from Mayor Diane Hamre of Clarington.

12 The official blueprint for the trail is the *Lake Ontario Greenway Strategy*, a publication which describes a multi-year development strategy based on ecosystem planning principles. This report helped advance the trail from an idea to reality.

13 Official Plans (OP) are analogous to General Land Use Plans in the United States. The Trust essentially uses the municipal consultation process for amending a city's official plan to get the parties to share their ideas about redeveloping a specific contaminated site.

14 Presentation of Keith West, Director, Waste Reduction Branch, Ontario Ministry of the Environment, at the WRT's 1998 Brownfields Symposium.

15 Ontario's new cleanup guidelines were patterned after the state of Massachusetts, providing flexibility among cleanup approaches including options for site specific risk assessment and stratified cleanup.

16 Brownfields redevelopment in this context is less about compliance issues and more about adopting a holistic approach to cleanup. Rather than a strict focus on adherence to environmental protection laws, a more straightforward question is posed: Given the particular land use, what remediation is necessary to avoid demonstrable environmental and human health effects? Ontario's cleanup philosophy is similar to many of the new state Voluntary Cleanup Programs in the USA.

17 As part of his presentation at the WRT's 1998 Brownfields Symposium, Keith West from Ontario's Ministry of the Environment, did acknowledge that overall the new guidelines were working "by-n-large," but that consistency among staff implementing the provincial MOU is still a sticking point.

18 The Trust, along with other key stakeholders, worked closely with the Ministry to develop and review the guidelines for risk-based site-specific cleanups. See the discussion of the Toronto Hydro project.

19 One of the major private funders is the Canadian Imperial Bank of Commerce. In 1996, the bank announced its partnership with the Waterfront Regeneration Trust as part of its commitment to community development and will provide \$1 million over a five year period. <http://www.waterfronttrust.org>

20 Cobourg has a population of 15,000 that is expected to increase by 20% in the next decade.

21 According to Hoffman, with 99% of Cobourg's waterfront lands now remediated, the redevelopment of these brownfields represents \$200 million dollars (Canadian) worth of construction projects and "countless dollars of renewed economic opportunities." Waterfront Regeneration Trust's 1998 Brownfields Symposium.

22 *Regeneration: Toronto's Waterfront and the Sustainable City: Final Report*, Royal Commission on the Future of the Toronto Waterfront, Minister of Supply and Services Canada, 1992, p. 452.

23 Lake Ontario Waterfront Trail Newsletter, Waterfront Regeneration Trust, Vol. 2, No. 1, p.2. Cobourg's City Hall, built in the late 1800s, is only 300 meters away from the harbor, but it does not face the waterfront; thus, leaving the impression that even the city fathers who commissioned the building turned their backs on the heavy industrial uses that occupied Cobourg's waterfront.

24 One cannot under score the important role that Hoffman played as a catalyst in Cobourg's waterfront redevelopment. Many private developers would not have persevered during the nearly ten years it took him from his first phone call in 1989 to officially acquiring the Canadian National Railways lands in 1997. "I sincerely believe that my most effective personal tool in expediting a resolution to the acquisition and remediation of these lands was my constant badgering of the industrial landowners over a period of years." WRT's 1998 Brownfields Symposium.

25 Hoffman purchased and redeveloped a total of 9.2 acres, including other sites adjacent and nearby the former McAsphalt Oil property. WRT's 1998 Brownfields Symposium.

26 Air sparging is an in situ remedial technology that reduces concentrations of volatile constituents in groundwater through the injection of contaminant-free air into the subsurface saturated zone. – EPA website.

27 Quote from James Hoffman. He estimates that because of the Trust's intervention his company saved two years in completing the clean-up and development.

28 WRT'S 1998 Brownfields Symposium.

29 During a panel discussion at WRT's 1998 Brownfields Symposium, Hoffman claimed that steps one, two and three were the most difficult, time consuming and expensive. The least difficult was the actual environmental cleanup itself.

30 Given that Hoffman intended to build condominiums, public education was extremely important to avoid a potential marketing disaster for residential development of these brownfields.

31 The Oil companies used a variety of cleanup technologies and approaches, including biopiles, air sparging, and dig and haul. Hoffman claims the most effective and cost efficient method was a "farming" technique his company refined over the past several years. At one site, Hoffman remediated two acres of land with hydrocarbon contamination exceeding 16,000 parts per million and reduced it to 100 parts per million within sixty days. WRT's 1998 Brownfields Symposium.

32 Over the past four years (1994-1998), the Bank of Montreal has supported Hoffman's development projects.

33 Cobourg's regeneration efforts included contributions of over \$200,000 by local private service organizations (i. e., Lions, Rotary, etc.), with \$400,000 of assistance from the WRT. Presentation by Wayne Deveau at the WRT's 1998 Brownfields Symposium.

34 According to Wayne Deveau, Director of Community Development for Cobourg, the marina and campground now accommodates about 4600 boats per season compared with 1200 a few years ago. Presentation made at the WRT's 1998 Brownfields Symposium.

35 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

36 Much of the Port Area was reclaimed in this manner as part of an ambitious engineering project initiated by the Toronto Harbor Commissions in 1917. *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

37 Ibid.

38 As an independent "arms-length" development corporation chartered by the City of Toronto, TEDCO's board is appointed by the City and all project revenues must go back into TEDCO programs and projects (e.g., incubators or real estate acquisitions). Presentation by Erkki Pukonen, President and CEO of TEDCO, at the WRT's 1998

Brownfields Symposium.

39 Ibid.

40 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

41 Ibid. The plan is based on the MOE's administrative direction set forth in the *Guideline For Use at Contaminated Sites in Ontario*.

42 Ibid.

43 Ibid.

44 The Trust managed this process because it required consensus among two levels of government, Imperial Oil, TEDCO, the area tenant, and the Bank of Commerce. The Trust initially devised the frame of reference for the stakeholders, blending the politics, communication, and technical cleanup issues into one package.

45 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

46 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

47 Ibid.

48 Ibid. This project was the first use of a site-specific risk assessment in a redevelopment project on Toronto's waterfront. Such a flexible approach allows the parties to manage their overall costs as long as the level of cleanup remains consistent with the next land use and does not compromise public health. Interesting enough, MOE did allow the use of a site-specific risk-based cleanup plan at this site, even though it was still working on its new provincial cleanup guidelines.

49 Shell disposed of 35,000 tons of contaminated soil and cleaned an additional 21,000 tons using low temperature thermal resorption technology before returning it to the site. Annual Report, Waterfront Regeneration Trust, 1995-1996, p. 14.

50 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

51 Ibid.

52 Site visit and presentation by Jeff Clark, Manager, Buildings & Facilities Department, for Toronto Hydro, as part of the WRT's 1998 Brownfields Symposium.

53 *Reinvesting in Toronto's Waterfront: A Case Study in Economic and Environmental Renewal in Toronto's Port Area*, a paper presented by Beth Benson, May 1998.

54 TEDCO owns roughly 1,000 acres of land in the port area, with 400 acres less than five minutes from the financial district of downtown Toronto. Presentation of Errki Pukonen at the WRT's 1998 Brownfields Symposium.

55 *Greening of the Toronto Portlands*, p. 8.

56 *Greening of the Toronto Portlands*, p. 9.